REMARKS/ARGUMENTS

A substitute specification is submitted to insert titles wherein appropriate, to correct the reference numeral error raised by the Examiner and to make terminology and grammatical changes to place the specification in better form. Furthermore, in paragraph [0018] the reference to the conductive screening cage is specifically set forth.

Claims 1-20 have been canceled and are replaced by Claims 21-34. It is submitted that these claims overcome the objections under 35 U.S.C. 112 and define over the prior art cited by the Examiner for the reasons set forth below.

Independent apparatus Claim 21 calls for the skull crucible of the refining vessel to have a leak-proof glass seal at the connecting point of the connection line wherein the seal is electrically shunted to ground. As discussed on page 7 of the specification as filed, this prevents high frequency leakage radiation from being let out of the high frequency zone through the connection line and through the electrodes. The claim further calls for a refining vessel configured as a skull crucible which enables the melted glass to be treated at a high temperature for refining and is achieved by introducing the glass through a connection line at the bottom of the refining vessel.

It is submitted that the cited references do not disclose the claimed subject matter either singly or in combination.

Tachibana discloses the treatment of a glass melt in a refining chamber which follows a melting vessel but the melt is not refined in a skull crucible and there is not disclosure of the claimed glass seal located at the connecting point of the connecting line and the refining vessel nor the electrical shunting of such a seal to ground. It is therefore submitted that Tachibana '834 fails to anticipate the subject matter of Claim 21 and the claims dependent thereon. Furthermore, neither Murakami '111 nor Lifanov provide the missing disclosure.

Method Claim 26 calls for the melt to be refined in the refining vessel to a temperature above 1650°C, support for which is found in the last paragraph on page 7 of the specification as filed. According to Tachibana '834, the refining temperature is specified as 1350-1500°C, which is below the refining temperature called for in Claim 26. Furthermore, the melt is not refined in a skull crucible as claimed in Claim 26. Murakami '111 also fails to disclose a refining vessel in the form of a skull crucible that follows a melting vessel wherein the connection is supplied from the bottom zone of the melting vessel to the bottom zone of

the refining vessel and then flowing to a steering vessel from the upper zone of the refining vessel via a cooling groove. Lifanov is similarly deficient.

It is submitted that Claims 21 and 26 define an apparatus and method that are neither disclosed by any of the references considered singly nor rendered obvious under 35 U.S.C. 103 by the references if combined. It is believed that the application is now in condition for allowance and such action is earnestly solicited.

The Examiner is invited to telephone the undersigned at 260-460-1692 if such would be of assistance in expediting prosecution of the application.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: July 26, 2004

JOHN F. HOFFMAN, REG. NO. 26,280
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July 26, 2004
Date